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EXAMINER

KASTLER, SCOTT R

ART UNIT

PAPER NUMBER

1793

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/620,318

**Applicant(s)**

COOPER, PAUL V.

**Examiner**

Scott Kastler

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-26, 38 and 39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-26, 38 and 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/25/2007 has been entered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 lacks antecedent basis for the term “the second coupling member”, thereby rendering the scope of the above claim unascertainable.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 14, 17-19, 21, 22, 25, 26, 38 and 39 are rejected under 35 U.S.C. 102(c) as being anticipated by Greer'860. Greer'860 teaches a coupling (6) in a rotary degasser including a coupling member with a tapered, non-threaded end made of steel and with apertures for tool insertion, thereby showing all aspects of the above claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 17, 19, 21, 22, 26, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Mordue'467. Mordue'467 teaches a rotary degasser including a coupling (44) with proximal (54) and distal (56) ends where the distal end is tapered and not threaded, including a bore therethrough which is smooth and could be employed for transferring gas, as well as apertures for tool insertion (see col. 7, lines 5-15 for example) thereby showing all aspects of the above claims except the instantly recited bore shape. However, since no new or unexpected results have yet been shown, in proper affidavit or declarative form to arise from the use of any desired bore shape, motivation to alter the bore shape of Mordue'467 to any other equally useful bore shape would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

Claims 14, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecklesdafer'652. Ecklesdafer'652 teaches a coupling (3) with proximal and distal ends where the distal end is tapered and not threaded, including a bore therethrough which is smooth and could be employed for transferring gas, since that manner or method of use of an apparatus cannot be relied upon to fairly further limit claims to the apparatus itself (see MPEP 2114) thereby showing all aspects of the above claims except the instantly recited bore shape. However, since no new or unexpected results have yet been shown, in proper affidavit or declarative form to arise from the use of any desired bore shape, motivation to alter the bore shape of Mordue'467 to any other equally useful bore shape would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

Claims 14-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winberg et al. teaches a coupling (C) with proximal (76) and distal (32) ends where the distal end is tapered and not threaded, where the proximal end is threaded, including a bore therethrough which is smooth and could be employed for transferring gas, thereby showing all aspects of the above claims except the instantly recited bore shape. However, since no new or unexpected results have yet been shown, in proper affidavit or declarative form to arise from the use of any desired bore shape, motivation to alter the bore shape of Mordue'467 to any other equally useful bore shape would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

Claims 14, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Mars et al or Sparling. Each of Mars et al and Sparling teaches a coupling (30 in Mars et al, figures 1-6 of Sparling) with proximal and distal ends where the distal end is tapered and not threaded, including a bore therethrough which is smooth and could be employed for transferring gas, thereby showing all aspects of the above claims except the instantly recited bore shape. However, since no new or unexpected results have yet been shown, in proper affidavit or declarative form to arise from the use of any desired bore shape, motivation to alter the bore shape of Mordue'467 to any other equally useful bore shape would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

Claims 14, 17, 19, 21, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mordue et al'247. Mordue et al'247 teaches a rotary degasser (1 in Figures 1 and 2) including a coupling (21) with a proximal and non-threaded, tapered distal end with a smooth bore therein which can allow gas transfer, thereby showing all aspects of the above claims except the instantly recited bore shape. However, since no new or unexpected results have yet been shown, in proper affidavit or declarative form to arise from the use of any desired bore shape, motivation to alter the bore shape of Mordue'467 to any other equally useful bore shape would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

Claims 14, 17, 19, 21, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper'074. teaches a rotary degasser (10) including a coupling (38) with a proximal (44) and non-threaded, tapered distal (42) end with a smooth bore therein which can allow gas transfer, thereby showing all aspects of the above claims except the instantly recited bore shape. However, since no new or unexpected results have yet been shown, in proper affidavit or declarative form to arise from the use of any desired bore shape, motivation to alter the bore shape of Mordue'467 to any other equally useful bore shape would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

Claims 15, 16, 18, 20, 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Either of Mordue et al'247 or Cooper'074 as applied to claims 14 and 21 above, in view of Howie et al and the admitted prior art of the instant disclosure. As applied above, each of Mordue'247 and Cooper'074 show couplings and rotary degassers showing all aspects of the above claims except the specific use of a "course" threaded proximal end, stainless steel as the coupling material, or the inclusion of a counterweight on the coupling, although each of Mordue et al'247 and Cooper'074 allow for the use of any desired material for the coupling construction and allow for the use of a threaded proximal end. Howie et al teaches that at the time the invention was made, it was known in the art to both employ a coupling device (65, 63) for the connection of shaft components in a rotary molten metal device, which includes a tapered, non-threaded end (65) and a threaded end (63) where the threads may be considered "course", as well as constructing the components from stainless steel (see col. 5 lines 10-40 for

example). Because each of Mordue et al'247 and Cooper'074 would require some type of material for the construction of the disclosed couplings as well as some connection means to be employed in the proximal ends of the couplings, motivation to employ commonly known connections and materials, as taught by Howie et al, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

The admitted prior art of the instant disclosure, at paragraph [0053] for example, teaches that counterweights were known to be employed in couplings for use in rotary degassers in order to improve performance. Because improved performance would also be desirable in the couplings of each of Mordue et al'247 and Cooper'074, motivation to include a counterweight as taught by the admitted prior art of the instant disclosure would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

### ***Response to Arguments***

Applicant's arguments filed on 10/25/2007 have been fully considered but they are not persuasive. Applicant's argument with respect to double patenting over the '105 application is moot in view of amendments to the '105 application cancelling the claims over which the double patenting rejections were made.

Applicant further argues that none of the cited prior art references applied above recite a bore having an end distal the opening and an end proximal the opening, wherein distal end is tapered and not threaded. This is not persuasive because as stated in the above rejections, Mordue'467 teaches a rotary degasser including a coupling (44) with proximal (54) and distal



(56) ends where the distal end is tapered and not threaded, Eckledefer'652 teaches a coupling (3) with proximal and distal ends where the distal end is tapered and not threaded, Winberg et al teaches a coupling (C) with proximal (76) and distal (32) ends where the distal end is tapered and not threaded, each of Mars et al and Sparling teaches a coupling (30 in Mars et al, figures 1-6 of Sparling) with proximal and distal ends where the distal end is tapered and not threaded, and . Mordue et al'247 teaches a rotary degasser (1 in Figures 1 and 2) including a coupling (21) with a proximal and non-threaded, tapered distal end. As stated in the above rejections, the bore shape has not yet been shown to impart any new or unexpected result, and it has been well settled that where no new or unexpected result is shown to arise therefrom, motivation to alter the shape of a component without materially altering the function of the component would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV B.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott Kastler/  
Primary Examiner, Art Unit 1793

sk